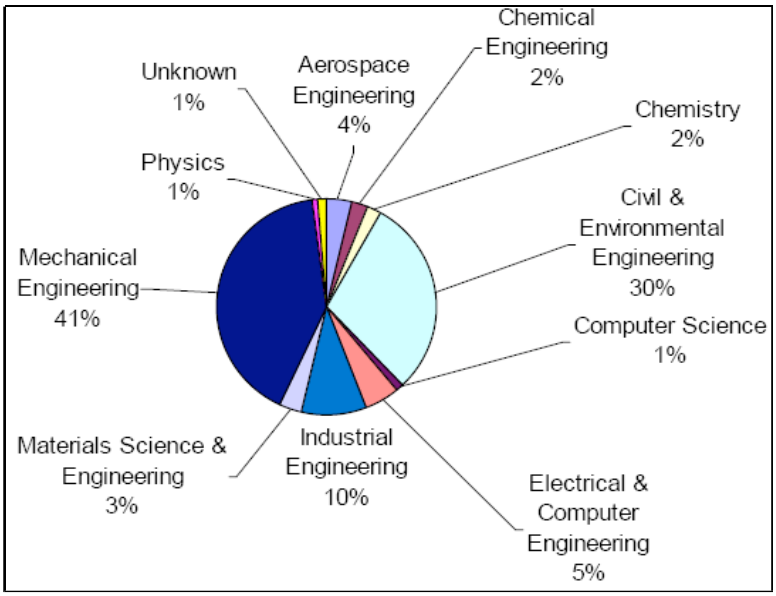
THE CMMI RESEARCH COMMUNITY

I do not think there is any thrill that can go through the human heart like that felt by the inventor as he sees some creation of the brain unfolding to success… Such emotions make a man forget food, sleep, friends, love, everything." Nikola Tesla

An analysis of proposals submitted and funded in fiscal year 2006 shows that CMMI serves a diverse research community with a focus in civil, mechanical and industrial engineering—that focus includes a wide range of additional disciplines. While well over 90 percent of the division's funding goes to the three core disciplines noted, the division entertains proposals submitted by researchers from such diverse disciplines as materials science, management science, mathematics, sociology, anthropology, architecture, urban planning, nuclear engineering, medicine and bioengineering.

In fiscal year 2006, about 43 percent of the funds distributed by the CMMI predecessor divisions were to professors in civil engineering departments. Comprising this civil engineering community are two major subdisciplines: structural engineering and environmental engineering.



The disciplinary distributions of proposals submitted to CMMI in fiscal year 2006

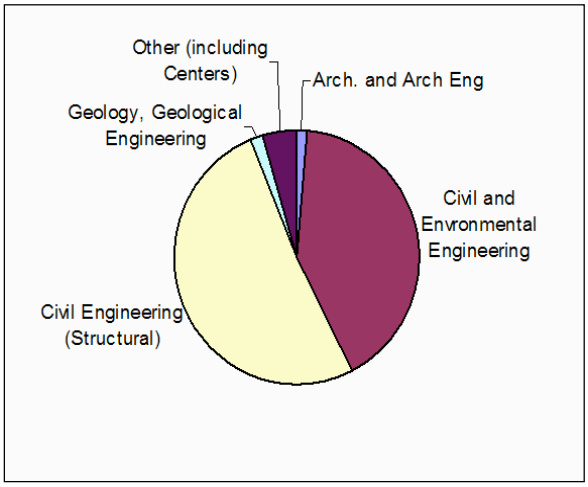
The mechanical engineering community supported by the division includes mainly those subdisciplines that relate to solid mechanics, sensing and control, engineering design, manufacturing, and emerging areas such as nanomanufacturing.

The division supports research in all traditional areas of industrial engineering and has recently added the emerging service sector, including healthcare engineering. The division has broadened the communities it serves by supporting research on hazards and hazard mitigation, particularly through its response to disasters including Hurricane Katrina and the Great Sumatra-Andaman Earthquake and Tsunami of 2004.

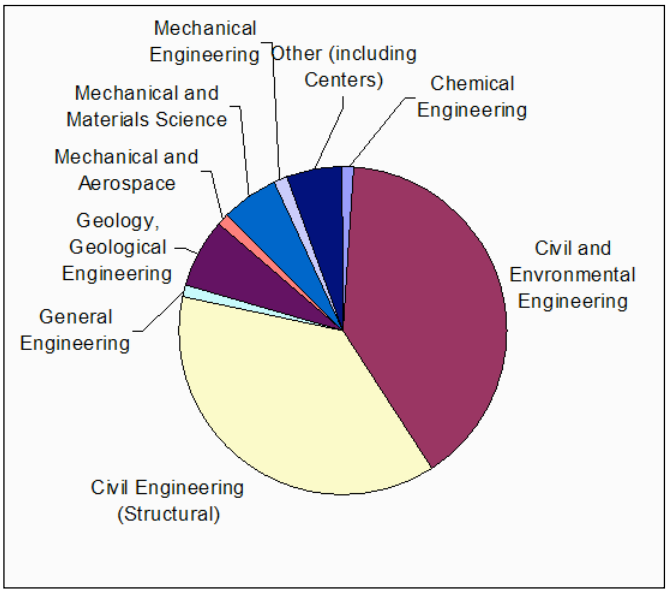
Diversity of CMMI programs

Examination of the disciplines supported by program provides additional insight. Programs that focus more on the established and traditional areas of the core disciplines tend to serve communities that are also more focused, whereas programs that focus on emerging areas, such as nanomanufacturing, tend to serve more diverse communities. New disciplines typically emerge from the union of heretofore-disparate disciplines. However expected this trend is, the challenge it offers CMMI is still large. Vitality in the division gained through the support of emerging technologies has widened the scope of the communities seeking its support.

The graphs presented here derive from an examination of proposals submitted to and awards made by the research programs of the CMMI forerunner divisions. Classification of disciplines is based on departmental declarations made by principal investigators on the cover page of the proposals.

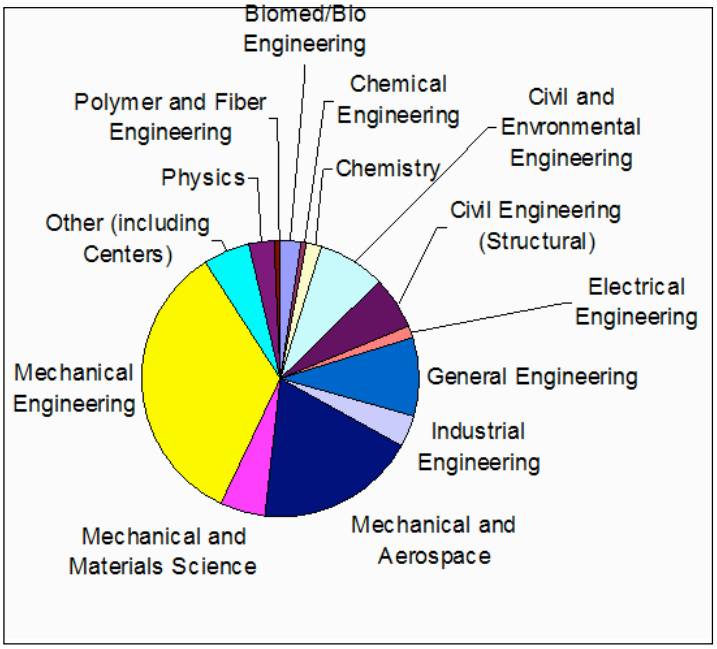


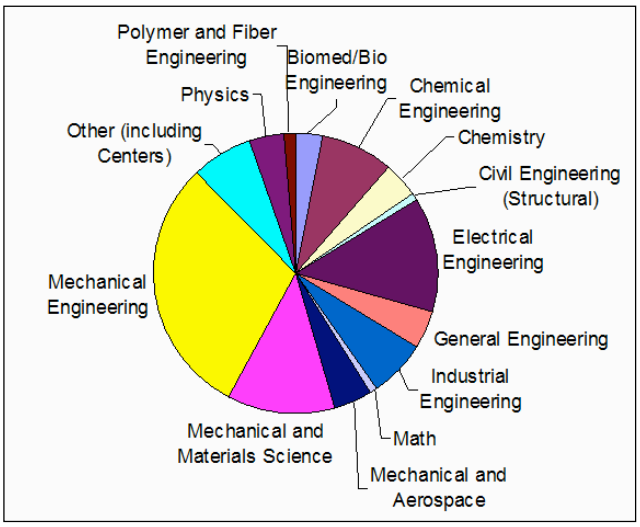
The disciplinary distribution of proposals submitted to the Network for Earthquake Engineering Simulation (NEES) research program in fiscal year 2006



The disciplinary distribution of proposals submitted to the Geomechanics and Geotechnical Systems Program in FY 2006

The disciplinary distribution of proposals submitted to the Nanomanufacturing program in fiscal year 2006





The disciplinary distribution of proposals submitted to the Mechanics and Structures of Materials Program in FY 2006